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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,824	02/27/2004	Iraj Saniee	9-7	6962
7590 Lucent Technologies Inc. Docket Administrator (Room 3J-219) 101 Crawfords Corner Road Holmdel, NJ 07733-3030			EXAMINER WEIDNER, TIMOTHY J	
			ART UNIT 2619	PAPER NUMBER
			MAIL DATE 03/17/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/788,824

Applicant(s)

SANIEE ET AL.

Examiner

Timothy J. Weidner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Amendment

1. No claims are amended.
2. Applicant's amendments, see pages 6 and 7, filed 12/12/2007, with respect to objections to the drawings and specification have been fully considered and are persuasive. The objections of the drawings and specification have been withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scholefield et al. (U.S. 5,742,592, herein "Scholefield") in view of Garcia-Luna-Aceves (U.S. 2002/0167960 A1, herein "Garcia").
 6. Regarding claim 1, Scholefield teaches a method, comprising:

7. at a base station scheduler (receiving node) (column 4, lines 19-21) of a communication network, receiving a request to schedule at least one timeslot of a recurrent cycle for receipt of burst transmissions (column 4, lines 14-19, 37-38; "an access request on all three timeslots ... received by the ... scheduler") from a subscriber (sending node) (column 4, lines 17-20) of the network;
8. (b) in response to the scheduling request, selecting at least one timeslot of the cycle for receipt of burst transmissions (column 4, lines 27-29; "an allocation of only these subchannels would be made"); and
9. (c) communicating the selected timeslot or timeslots to the sending node (column 4, lines 37-44; "send back ... separate allocation messages on each subchannel").
10. However, Scholefield does not teach selecting in a manner which is independent of timeslot selections made by other nodes of the network. Garcia, which is in the same field of endeavor, teaches selecting in a manner which is independent of timeslot selections made by other nodes of the network (paragraph 0030; "nodes admit new nodes for quasi-static scheduling independently of one another") for the purpose of "allowing a new node to start using the time slots ... after it receives routing messages from some or all of its neighbors".
11. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select at least one timeslot of the cycle (Scholefield) in a manner which is independent of timeslot selections made by other nodes of the network (Garcia) to allow a new node to start using the time slots after it receives routing messages from some of its neighbors.

12. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scholefield et al. (U.S. 5,742,592, herein "Scholefield") in view of Garcia-Luna-Aceves (U.S. 2002/0167960 A1, herein "Garcia") as applied to claim 1 above, and further in view of Peterson (U.S. 6,301,262 B1).

13. Regarding claim 2, Scholefield teaches in at least one instance of the recurrent cycle at the sending node, transmitting a burst via the designated subchannels within the recurrent cycle (column 4, lines 43-46), but does not teach determining at least one time at which bursts need to depart in order to arrive at the receiving node within a selected timeslot, and transmitting a burst at least at one of the times that have been determined. Peterson, which is in the same field of endeavor, teaches determining at least one time at which bursts need to depart in order to arrive at the receiving node within a selected timeslot (column 6, lines 14-24; "determines if a time slot exists in which a message may be injected ... so that it may be received ... at a time when the requested resources are receptive to receiving"), and transmitting a burst at least at one of the times that have been determined (column 6, lines 14-24; "a message may be injected") for the purpose of solving the problem of propagation time due to distance between communications resources (column 2, lines 6-18).

14. It would have been obvious to one of ordinary skill in the art at the time the invention was made to in addition to the method taught by Scholefield, determine at least one time at which bursts need to depart in order to arrive at the receiving node within a selected timeslot, and transmit a burst at least at one of the times that have

been determined to solve the problem of propagation time due to distance between communications resources.

15. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholefield et al. (U.S. 5,742,592, herein "Scholefield") in view of Garcia-Luna-Aceves (U.S. 2002/0167960 A1, herein "Garcia") as applied to claim 1 above, and further in view of Padovani et al. (U.S. 6,574,211 B2, herein "Padovani") and Dail et al. (U.S. 5,570,355, herein "Dail").

16. Regarding claim 3, Scholefield teaches detecting an idle period (column 6, lines 50-51), but does not teach detecting non-receipt of a scheduled burst at the receiving side; selecting a timeslot in substitution for the timeslot of the non-received burst; and communicating the selected substitute timeslot to the sending node.

17. Padovani, which is in the same field of endeavor, teaches detecting non-receipt of a scheduled burst at the receiving side (column 15, lines 36-40; "missing data units are considered as though received in error") for the purpose of then transmitting NACK messages corresponding to the missing data units.

18. It would have been obvious to one of ordinary skill in the art at the time the invention was made to in addition to the method taught by Scholefield, detect non-receipt of a scheduled burst at the receiving side to then transmit a NACK message corresponding to the missing data units.

19. Dail, which is in the same field of endeavor, teaches selecting a timeslot in substitution for the timeslot of the non-received burst (column 3, lines 65-67; column 4, lines 1-4; "a 'hole' ... is taken account of by 'repacking', which refers to reallocation of

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time slots to existing calls"); and communicating the selected substitute timeslot to the sending node (column 4, lines 13-17; "stations are notified of the new ... time slot allocations by sending messages") for the purpose of adapting to the changing demands of a mix of STM and ATM applications (column 2, lines 53-57).

20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to in addition to the method taught by Scholefield and modified by Padovani to select a timeslot in substitution for the timeslot of the non-received burst, and communicate the selected substitute timeslot to the sending node to adapt to the changing demands of a mix of STM and ATM applications.

21. Regarding claim 4, Scholefield teaches deferring completion of a first data transfer for a higher priority data transfer (column 5, lines 47-54), but does not teach the selection of a substitute timeslot. Dail teaches selecting a substitute timeslot that has already been scheduled as in the instant invention alternative (column 4, lines 1-2; "reallocation of time slots to existing STM calls") for the purpose of adapting to the changing demands of a mix of STM and ATM applications.

22. It would have been obvious to one of ordinary skill in the art at the time the invention was made to in addition to the method taught by Scholefield and modified by Padovani and Dail to select a substitute timeslot that has already been scheduled to adapt to the changing demands of a mix of STM and ATM applications.

Response to Arguments

23. Applicant's arguments filed 12/12/2007 regarding claim 1 have been fully considered but they are not persuasive. Applicant says the Garcia reference fails to

teach or suggest selecting in a manner which is independent of timeslot selections made by other nodes of the network. Examiner respectfully disagrees.

24. Applicant refers to paragraph 31 of Garcia, which says "In steady state, all nodes that have been admitted into the network assign the same time slot to the same node ID, because all of them have the same list of admitted network nodes and all nodes used the same starting point (i.e. slot 1) for the allocation of nodes to slots in quasi-static scheduling," and concludes the assignment of timeslots among nodes of the network is coordinated. This may be true, but only for the steady state condition.

25. Garcia teaches time slots of the quasi-static schedule are assigned to nodes based simply on the identifiers of other nodes (paragraph 87), i.e. not based on timeslot selections made by other nodes. Although the timeslot selections are expected to be the same for each node in the steady state (paragraph 88), Garcia teaches asynchronous scheduling by each node assuming a new quasi-static schedule immediately after receiving an updated node list causing different nodes to have different timeslot selections (paragraph 94). At this stage, nodes may incorrectly receive bursts due to collisions (paragraph 95). Advantageously though, asynchronous scheduling is very easy to implement (paragraph 96), and steady state is reached in an amount of time based on the maximum length in hops (paragraph 98). Therefore, Garcia teaches scheduling timeslots in a manner which is independent of timeslot selections made by other nodes.

26. Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select at least one timeslot of the cycle (Scholefield) in a

manner which is independent of timeslot selections made by other nodes of the network (Garcia) to allow a new node to start using the time slots immediately after it receives routing messages from only some of its neighbors.

27. Applicant's arguments, see pages 9 and 10, filed 12/12/2007, with respect to the rejection(s) of claim(s) 5 under 35 USC 103(a) have been fully considered and are persuasive. The rejection of claim 5 has been withdrawn. Claim 6 depends on claim 5, and is therefore withdrawn as well.

Allowable Subject Matter

28. Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Weidner whose telephone number is (571) 270-1825. The examiner can normally be reached on Monday - Friday, 8:00 AM - 5:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHAU T. NGUYEN/
Supervisory Patent Examiner, Art Unit 2619

/Timothy J Weidner/
Examiner, Art Unit 2619